

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

NCS MULTISTAGE,
Plaintiff

-v-

TCO AS,
Defendant

6:20-CV-00622-ADA

CLAIM CONSTRUCTION ORDER

Before the Court are the parties' claim construction briefs: Plaintiff NCS Multistage's (NCS) opening and responsive briefs (ECF No. 67 and 69, respectively) and Defendant TCO AS's opening and responsive briefs (ECF No. 73 and 75, respectively). The Court held the *Markman* hearing on June 4, 2021. ECF. No. 87. During that hearing, the Court informed the Parties of the constructions it intended to provide. This Order does not alter any of those constructions.

I. Background

NCS Multistage filed this lawsuit on July 9th, 2020 alleging that TCO infringed on U.S. Patent No. 10,465,445 ('445). ECF No. 1. NCS Multistage then filed their First Amended Complaint on January 22, 2021. ECF. No. 50. TCO answered on February 9th, 2021. ECF. No. 57. NCS Multistage asserts claims 14-15, 22-25, 27-29, 36-43, 46,50-53, and 55-57. ECF. No 50 at 7.

The '445 Patent is a "casing float tool." ECF No. 50 at 4. This float tool is intended to reduce horizontal drag when the casting string is run into the horizontal portion of a wellbore. *Id.* In this system, the string is run into the wellbore with a tubular body attached to the casing

string. *Id.* Within the tubular body, and capping it off, is the rupture disc. *Id.* While placing the string, the tubular is filled with air, creating buoyancy in the lower portion of the string and reducing drag between the string and the wall of the horizontal portion of the wellbore. *Id.* at 5. Once the string is set, “hydraulic pressure is applied from the surface, which causes the rupture disc to disengage from the tubular walls and shatter.” *Id.* Importantly, the shattering is a result of the disengagement with a casing ring and not a result of the hydraulic pressure. As stated in the brief summary “hydraulic pressure does not cause the rupture of the disk all by itself.” ’445 Patent at 2:14-15. Once the “cap” is shattered, fluid, concrete in most instances, can flow through the tubular and around the casing. *Id.*

II. Legal Principles

The general rule is that claim terms are generally given their plain and ordinary meaning. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc); *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014) (“There is a heavy presumption that claim terms carry their accustomed meaning in the relevant community at the relevant time.”) (vacated on other grounds). The plain and ordinary meaning of a term is the “meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips*, 415 F.3d at 1313.

“Although the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)). “[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in

the intrinsic record that the patentee intended the claims to be so limited.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

Although extrinsic evidence can also be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004)).

Technical dictionaries may be helpful, but they may also provide definitions that are too broad or not indicative of how the term is used in the patent. *Id.* at 1318. Expert testimony also may be helpful, but an expert’s conclusory or unsupported assertions as to the meaning of a term are not. *Id.*

The “only two exceptions to [the] general rule” that claim terms are construed according to their plain and ordinary meaning are when the patentee (1) acts as his/her own lexicographer or (2) disavows the full scope of the claim term either in the specification or during prosecution. *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). To act as his/her own lexicographer, the patentee must “clearly set forth a definition of the disputed claim term,” and “clearly express an intent to define the term.” *Id.* at 1365. To disavow the full scope of a claim term, the patentee’s statements in the specification or prosecution history must represent “a clear disavowal of claim scope.” *Id.* at 1366. Accordingly, when “an applicant’s statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable.” *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013).

Courts presume that the preamble does not limit the claims. *Am. Med. Sys., Inc. v. Biolitec, Inc.*, 618 F.3d 1354, 1358 (Fed. Cir. 2010) (quoting *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002)) (“Generally,” we have said, “the preamble does not

limit the claims.”). But “[i]n general, a preamble limits the invention if it recites essential structure or steps, or if it is ‘necessary to give life, meaning, and vitality’ to the claim.” *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999)). “Conversely, a preamble is not limiting ‘where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.’” *Catalina*, 289 F.3d at 808 (quoting *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997)). The Federal Circuit has provided some “guideposts” regarding whether the preamble is limiting: (1) preamble provides antecedent basis, (2) preamble is essential to understand limitations or terms in the claim body, (3) preamble recites “additional structure or steps underscored as important by the specification,” and (4) “clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art.” *Catalina*, 289 F.3d at 808–09.

The order in which steps of a method appear in a claim is not a limitation on that claim unless either (1) “as a matter of logic or grammar, [the steps] must be performed in the order written” or (2) the specification “directly or implicitly requires such a narrow construction.” *Altiris Inc. v. Symantec Corp.*, 318 F. 3d 1363, 1369–70 (Fed. Cir. 2003) (internal quotations and citations omitted). The specification and prosecution history can support a construction requiring the steps to be performed in the order written in the claims. See, e.g., *Loral Florchild Corp. v. Sony Corp.*, 181 F.3d 1313, 1321–22 (Fed. Cir. 1999); *Function Media, LLC v. Google, Inc.*, 708 F.3d 1310, 1320 (Fed. Cir. 2013).

III. Legal Analysis

Previous constructions by a court are not binding but are considered highly persuasive and would require a convincing new argument or evidence to be overcome. *Crossroads Sys. v. DOT*

Hill Sys. Corp., No. A-13-CA-800-SS, 2015 U.S. Dist. LEXIS 77531, at *9 (W.D. Tex. June 15, 2015). Because of the considerable weight given to previous constructions of identical or nearly identical terms in the ongoing litigation of *NCS Multistage v. Nine Energy Serv.*, the Court has determined that “region of the tubular member where rupture disc is attached...,” “rupture burst pressure,” “a rupturing force greater than the rupture burst pressure,” and “specific gravity of the well fluid” will be construed as plain and ordinary meaning.

A. “Sealed Chamber” (Claim 8, 14, 22, 36, 40, 42, 46, and 50)

NCS Multistage’s Proposed Construction	TCO AS’s Proposed Construction
Plain and ordinary meaning.	Substantially fluid-tight chamber where the rupture disc forms an upper seal of the chamber, a float device forms a lower seal of the chamber, and a casing string there between.

NCS construes that there is no ambiguity in the term “sealed chamber” and that a person of ordinary skill in the art (POSITA) can easily explain the term to the jury. ECF No. 67 at 5. They argue that TCO’s construction improperly narrows the term “sealed chamber” by restricting the definition of the lower seal of the chamber. *Id.* NCS points to two names for the lower seal used in other claims that would be restricted if TCO’s construction is accepted, a “flat shoe,” and the “lower seal is within a float collar.” *Id.*

TCO first raises the issue by claiming that the Court instructs the jury on the explanation of a claim term, and not a person of ordinary skill in the art. ECF No. 69 at 5. Importantly, because NCS’s construction is plain and ordinary, the Federal Circuit has stated, “[w]e have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). Implying that the person of ordinary skill in the art would be able to vocalize the meaning as they understood it.

TCO also believes that NCS “chose to be its own lexicographer and its attempt to broaden the scope of the claims of the ‘445 patent is transparent.” *Id.* Their argument hinges on the presumption that the definition of a “sealed chamber” given in the patent is not plain and ordinary and that the drafters felt compelled to include this definition to make that clear. TCO then cites the patent and shows that their construction conforms to the given definition in the ‘445 Patent and does not exclude any specific embodiment from the specification. ‘445 at 4:19-30; *Id.*

The court agrees with NCS’s construction of plain and ordinary meaning for several reasons. First, construing a “float device” to form the lower seal of the chamber, when other terms are used in separate claims, could unnecessarily confuse either a POSITA or a member of the jury. Second, the court believes that the patentee did not choose to be its own lexicographer in claim four of the ‘445 Patent lines 19-30. The definition provided in this section is consistent with the plain and ordinary meaning and does not broaden the scope of the claim. While TCO’s construction appears to be consistent with parts of the definition provided, the construction neither further elaborates nor makes clear the definition and is therefore unnecessary. And lastly, as previously stated, and contrary to TCO’s assertion, because NCS’s construction is plain and ordinary meaning the term must satisfy the barrier of being understood by a POSITA who in turn would explain the definition to a jury; it is not the Court who explains the plain and ordinary definition to a jury.

B. “Within the Upper and Lower Ends” (Claims 1, 8, 14-15, 22-25, 27-29, 36-43, 46, 50-53, and 55-57)

NCS Multistage’s Proposed Construction	TCO AS’s Proposed Construction
Plain and Ordinary Meaning	Inside of the upper and lower ends

TCO moves to change “within” to “inside,” claiming that “within” does not have a plain and ordinary meaning. ECF No. 69 at 6. Contrary to their own statement, TCO points to extrinsic evidence that the definition of within is “in or into the inner part,” indicating the dictionary definition of “within” as plain and ordinary. *Id.* at 7. TCO then points out that “a POS[IT]A would understand that ‘within the upper and lower ends’ means ‘inside the upper and lower ends,’” proving NCS’s point. *Id.* at 6. As previously stated, “the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips*, 415 F.3d at 1313. TCO then focuses a significant portion of their argument against what they believe to be NCS’s construction that changes “within” to “between.” *Id.* Importantly, NCS did not create this construction. NCS’s construction has been and remains to be “plain and ordinary meaning” and has made no attempts to alter “within” to “between.” ECF No. 67 at 6.

Because “within” can be plainly understood and explained to a jury by a POSITA, and because NCS does not attempt to construe the meaning of “within” to mean “between,” the Court agrees with NCS’s construction of plain and ordinary meaning.

C. Preamble: “A float tool configured for use in positioning a casing string in a wellbore...” (Claims 1, 28, 30, and 31)

NCS Multistage’s Proposed Construction	TCO AS’s Proposed Construction
No construction necessary, the preamble is not limiting.	The preamble is limiting because, when read in the context of the entire claim, the preamble either recites limitations of the claim, or is necessary to give life, meaning, and vitality to the claim limitations.

The parties have two limitation disputes over the identical preambles in claims 1 and 28. First, whether the bodies of claims 1, 28, 30, and 31 rely on the preamble for the phrase “casing string,” and second whether the preamble defines essential structure. ECF No. 69 at 8.

NCS contends that there is nothing that qualifies as essential structure or steps necessary to understand the claims. ECF. No. 67 at 9. They argue that the bodies of claims 1 and 28, and not the preamble, recite the components of a rupture disc assembly. *Id.* Whereas the preamble states the “purpose or intended use” as “a float tool to position a casing string in a wellbore with fluid.” *Id.*

TCO rebuts by claiming that the preambles are indeed limiting because they “[recite] essential structure” and/or “[are] necessary to give life, meaning, and vitality to the claim.” *Shoes by Firebug LLC v. Stride Rite Children’s Grp., LLC*, 962 F.3d 1362, 1367 (Fed. Cir. 2020) (internal citations omitted.) ECF No. 69 at 8. TCO specifically points to the preamble as the “antecedent basis for the phrase ‘casing string’.” *Id.* To which NCS responds with the same case law. ECF No. 73 at 4. NCS uses *Firebug* and found that “antecedent basis alone is not determinative of whether a preamble is limiting.” F.3d at 1367. NCS shows that the “casing string” description in the preamble does not “recite essential structure” and that it is merely used to describe the intended purpose of the claimed apparatus of claims 1 and 28, the rupture disc assembly. *Catalina Mktg. Int’l v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002); ECF

No. 73 at 5. And lastly, TCO claims that both the examiner and NCS relied on the preamble of claims 1 and 28 for the structure for the “limitation that the [internal diameter] of the disc attachment is larger and parallel to the [internal diameter] of the casing.” ECF No. 69 at 8. NCS explains that the preamble was not relied upon for understanding because this comparison of internal diameters was used as a reference point to describe the rupture disc’s internal structure and that a POSITA would understand this obvious limitation without looking at the preamble, thus, not relying on it. ECF No. 73 at 4.

The Court finds that the preamble is not limiting. Upon examination, there is no reliance in the body of claims 1, 28, 30 and 31 on the preamble of claims 1 and 28. By TCO’s own test, in the opinion of the court, deleting the preamble would not render the body of the claims nonsensical and the reference to internal diameters is not a statement of structure, but rather used as a reference point. ECF No. 75 at 4; ECF No. 73 at 4-5.

D. “A method for installing casing in a wellbore containing... in the lower horizontal portion of the wellbore.” (Claims 22–25, 27, 50–53, and 55–57)

NCS Multistage’s Proposed Construction	TCO AS’s Proposed Construction
Not indefinite as a mixed method-apparatus claim.	Indefinite as a mixed method-apparatus claim.

Due to their nearly identical nature, claim terms 9 and 10 which cover method claims 22 and 50 will be concurrently analyzed as mixed method-apparatus claims.

The main dispute in these claims is whether NCS improperly mixed both method and apparatus within the same claim, creating uncertainty as to when the claim is infringed upon. ECF No. 69 at 9. NCS contends that the claim is an accepted and common format and that direct infringement occurs on one of the two method steps. ECF No. 73 at 6. TCO asserts that claims

22 and 50 recite both method and apparatus limitations, making it impossible for a party to know when they are either infringing or contributorily infringing. ECF. No. 69 at 9.

NCS opens by arguing that these claims are certainly method claims. ECF No. 67 at 10. The preamble of claims 22 and 50 begin by stating “a method,” prompting the reader as to the purpose of the claim. *Id.* The next two paragraphs comprise the body, beginning with the terms “running” and “floating,” defining the action to which an infringer must take in order to infringe. Proceeding these terms are descriptions of structures that are used in the method steps. *Id.* Infringement in these claims, NCS argues, occurs by “running” and “floating,” not by “simply making a sealed chamber with a rupture disc assembly and a lower seal.” *Id.* at 11.

TCO responds with two arguments, that claims 22 and 50 recite both method steps and apparatus limitations, and that prosecution history during the original application of the patent reveals the patentee’s intent for a single claim covering both an apparatus and method of use of that apparatus. ECF. No. 69 at 9-11. TCO censures NCS’s approach to the structuring of the patent. Claims 22 and 50 are intended to be method claims, after stating each method step NCS inserts a specific apparatus, the rupture disc assembly, to be used during the method step. *Id.* at 10. TCO cites *IPXL Holdings, L.L.C. v. Amazon.com Inc.*, arguing that this organization is not “sufficiently precise to provide competitors with an accurate determination of the ‘metes and bounds’ of protection involved.” 430 F.3d 1377, 1384 (Fed. Cir. 2005); *Id.* at 10-11. Next, TCO attempts to reveal the true intent of NCS during the patent prosecution. *Id.* at 11. The original version of the ‘445 patent did not include the description of the rupture disc apparatus, and only included the “running” and “floating” steps. *Id.* at 11. The patent examiner rejected this on two grounds, this claim was “(1) anticipated by “Buoyancy Assist Extends Casing Reach in Horizontal Well” by Rogers, *et al.*; and (2) non-statutory double patenting over a co-pending

application, and previously issued patent.” *Id.* at 11-12. After rounds of clarification, NCS ultimately remedied this situation by amending the apparatus claims 1 and 28 and including the text into the method claims 22 and 50, respectively. *Id.* at 13. TCO argues that the initial addition of the apparatus text, used for clarification in the method claims 22 and 50, and the rounds of changes which focused on amending the apparatus claims and subsequently their use in the method claim, revealed NCS’s intentions to procure a claim mixing the two. *Id.* at 16.

The court rules that claim terms 9 and 10 are not indefinite as mixed-method and apparatus claims for various reasons. First, the court now adopts similar reasoning used in *Animal Care Sys. v. Hydropac/Lab Prods.*, Civil Action No. 13-cv-00143-MSK-BNB, 2015 U.S. Dist. LEXIS 15987, at *41 (D. Colo. Feb. 9, 2015). Specifically, an identical description of an apparatus previously stated in a separate claim may be used in order to further define a preceding, properly stated, and clear method within the same claim. If a claim is written in accordance with these standards, such a claim will not be considered a “mixed-method and apparatus claim” and will be permissible as a method claim. Claims 22 and 50 are an examples of such claims. Here, a potential infringer clearly does not infringe by simply constructing the apparatus. The infringement occurs when this specific apparatus is in a sequence of the two methods stated, “running” then “floating” the apparatus. The court also disagrees with TCO’s assertion that the true intentions of NCS were to create a mixed method apparatus claim and were revealed during patent prosecution. NCS, in their initial submittal to the patent office, included no detail beyond the method steps. ECF No. 69 at 11. If anything, this reveals the opposite of TCO’s conclusion. NCS initially intended for these two claims to be nothing beyond simple, short method claims, but the examiner required more detail. For the foregoing reasons,

infringement undeniably occurs through violation of both of the method steps, and claims 22 and 50 are not “mixed method apparatus” claims.

IV. Summary

No.	Claim Term	Courts Final Construction
1	Sealed Chamber	Plain and Ordinary Meaning
2	Within the Upper and Lower Ends	Plain and Ordinary Meaning
3	Preamble: “A float tool configured for use in positioning a casing string in a wellbore...” (Claims 1, 28, 30, and 31)	No Construction Necessary
4	“A method for installing casing in a wellbore containing... in the lower horizontal portion of the wellbore.” (Claims 22–25, 27, 50–53, and 55–57)	Not a “mixed method apparatus” claim

SIGNED this 5th day of July, 2021.



ALAN D ALBRIGHT
UNITED STATES DISTRICT JUDGE